

CHAPTER 8  
TECHNICAL ASSISTANCE AND ENERGY CONSERVATION:  
GRANT PROGRAMS FOR SCHOOLS AND HOSPITALS  
AND FOR BUILDINGS OWNED BY UNITS OF LOCAL  
GOVERNMENT AND PUBLIC CARE INSTITUTIONS

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[Prior to 3/11/87, see Energy Policy Council[380] Ch 8]

**565—8.1(473) General.** The technical assistance and energy conservation measures programs are steps two and three of the three-step energy audit and conservation program that is partially funded by the United States Department of Energy. The department rules for step one of this program are in 565—Chapter 7. The federal regulations for this program are in 10 CFR 455 and 450 (1985).

**8.1(1) Purpose and scope.** This subrule specifies:

*a.* What constitutes a technical assistance program eligible for financial assistance under this part, and sets forth the eligibility criteria for schools, hospitals, units of local government and public care institutions to receive grants for technical assistance to be performed in buildings owned by such institutions; and

*b.* What constitutes an energy conservation measure that may receive financial assistance under this part and sets forth the eligibility criteria for schools and hospitals to receive grants for energy conservation measures, including renewable resource measures.

**8.1(2) Definitions.** All definitions from 565—subrule 7.1(2) are applicable to this chapter.

**565—8.2(473) Technical assistance program.**

**8.2(1) Eligibility.** To be eligible to receive financial assistance for a technical assistance program, an applicant must:

*a.* Be a school, hospital, unit of local government or public care institution as defined in 565—Chapter 7, or be a coordinating agency representing a group of eligible institutions and which has been granted authority by the institutions to act in their behalf;

*b.* Have conducted an energy audit or its equivalent in accordance with 565—Chapter 7 for the building for which financial assistance is to be requested, subsequent to the most recent construction, reconfiguration or utilization change which significantly modified energy use within the building;

*c.* Give assurance that it has implemented all energy conservation maintenance and operating procedures identified as a result of the energy audit, or provide a satisfactory written justification for not implementing any specific maintenance and operating procedures so identified; and

*d.* Submit an application in accordance with the provisions of these rules.

**8.2(2) Contents of a technical assistance program.**

*a.* A technical assistance program shall be conducted by a qualified technical assistance analyst, who shall consider all possible energy conservation measures for a building, including renewable resource measures. A technical assistance program shall include a detailed engineering analysis to identify the estimated costs of, and the energy and cost savings likely to be realized from, implementing each identified energy conservation maintenance and operating procedure. A technical assistance program shall also identify the estimated cost of, and the energy and cost savings likely to be realized from, acquiring and installing each energy conservation measure, including renewable resource measures, that indicate a significant potential for saving energy based upon the technical assistance analyst's initial consideration.

*b.* At the conclusion of a technical assistance program, the technical assistance analyst shall prepare a final report which shall include:

(1) A description of building characteristics and energy data including the results of the preliminary energy audit and energy audit (or its equivalent) of the building, the operating characteristics of energy using systems, and the estimated remaining useful life of the building;

(2) An analysis of the estimated energy consumption of the building, by fuel type (in total Btu's and Btu/sq. ft. • yr.), at optimum efficiency (assuming implementation of all energy conservation maintenance and operating procedures);

(3) An evaluation of the building's potential for renewable resource conversion, including water heating systems;

(4) A listing of any known local zoning ordinances and building codes which may restrict the installation of renewable resource systems;

(5) A description and analysis of all recommendations, if any, for acquisition and installation of energy conservation measures, setting forth: A description of each recommended energy conservation measure; an estimate of the cost of design, acquisition and installation of each energy conservation measure; an estimate of the useful life of each energy conservation measure; an estimate of increases or decreases in maintenance and operating costs that would result from each energy conservation measure, if any; an estimate of the salvage value or disposal cost of each energy conservation measure at the end of its useful life, if any; and an estimate of the annual energy and energy cost savings (using current energy prices) expected from the acquisition and installation of each energy conservation measure. In calculating the potential energy cost savings of each recommended energy conservation measure, technical assistance analysts shall:

Assume that all energy savings obtained from energy conservation maintenance and operating procedures have been realized,

Calculate the total energy and energy cost savings by fuel type expected to result from the acquisition and installation of all recommended energy conservation measures, taking into account the interaction among the various measures,

Calculate that portion of the total energy and energy cost savings, as determined above, attributable to each individual energy conservation measure;

(6) A listing of energy use and cost data for each fuel type used for the most current 12-month period ending June 30; and

(7) Technical assistance analyst's statement. The report shall include a statement signed by the analyst that the analyst meets the applicable qualifications as set forth in rule 8.8(473), that the analyst has indicated any financial interests in accordance with 565—paragraph 7.5(3)“d,” and that the technical assistance program was conducted in accordance with the requirements of this subrule.

c. All applications will use the following conversion factors when calculating Btu content of fuels:

|                     |  |
|---------------------|--|
| Natural gas         | 1,000 Btu's per cubic foot;              |
| Distillate fuel oil | 130,000 Btu's per gallon;                |
| Residual fuel oil   | 150,000 Btu's per gallon;                |
| Coal                | 22,000,000 Btu's per standard short ton; |
| LP gas              | 95,000 Btu's per gallon;                 |
| Steam               | 1,000 Btu's per pound;                   |
| Electricity         | 3,413 Btu's per kilowatt-hour.           |

**565—8.3(473) Energy conservation measures program.**

**8.3(1) Eligibility.** To be eligible to receive financial assistance for an energy conservation measure, including renewable resource measures, an applicant must:

*a.* Be a school or hospital, or both as defined in 565—Chapter 7 or be a coordinating agency which represents groups of eligible institutions and which has been granted authority by the institutions to act in their behalf;

*b.* Have completed a technical assistance program or its equivalent in accordance with these rules for the building for which financial assistance is to be requested, subsequent to the most recent construction, reconfiguration or utilization change to the building which significantly modified energy use within the building;

*c.* Have implemented all energy conservation maintenance and operating procedures which are identified as the result of an energy audit and a technical assistance program, or have provided a satisfactory written justification for not implementing any specific maintenance and operating procedures so identified;

*d.* Have no plan or intention at the time of application to close or otherwise dispose of the building for which financial assistance is to be requested within the simple payback period of any energy conservation measure recommended for that building. The simple payback period shall be calculated with 10 CFR 455.42(d)(5)(vii);

*e.* Submit an application in accordance with the provisions of these rules;

*f.* Demonstrate that the simple payback period of each energy conservation measure for which financial assistance is requested is not less than two years nor greater than ten years, and the estimated useful life of the measure is greater than its simple payback period.

**8.3(2) Contents of an energy conservation measure program.** The contents of an energy conservation measure program are at 10 CFR 455.52, April 20, 1985, which describe measures to reduce energy consumption or measures to allow the use of alternative energy resources.

All applications will use conversion factors from 8.2(2) “c” when calculating Btu content of fuels.

**565—8.4(473) Grant application submittals.** All applications for grants must be completed with assistance of energy bureau staff. Within 30 days of the department’s recommendation to the U.S. Department of Energy, the applicant must remit to the department a processing fee of 5 percent of the federal grant’s share of the application. If the applicant does not receive a grant, the fee will be returned.

**8.4(1) Technical assistance programs.**

*a.* Application from schools, hospitals, units of local government, public care institutions for financial assistance for technical assistance programs shall include:

(1) The applicant’s name and mailing address;

(2) A written statement certifying that the applicant is eligible under 8.2(1);

(3) The results of the preliminary energy audit and energy audit (or its equivalent) for each building for which financial assistance is requested;

(4) A project budget by building which stipulates the intended use of all federal and nonfederal funds, and identifies the sources and amounts of nonfederal funds, including in-kind contributions (limited to the goods and services described in OMB Circular A-102, “Uniform Administrative Requirements for Grants-in-Aid to State and Local Governments,” which are directly related to the project and do not include funds derived from revenue sharing or other federal sources), to be used to meet the cost-sharing requirements described in these rules;

(5) A brief description by building of the proposed technical assistance program.

*b.* Applications for financial assistance for technical assistance programs provide that the applicant:

- (1) Has satisfied the requirements set forth in 8.4(1) “a”;
- (2) Will expend granted funds for the purpose stated in the application and in compliance with federal requirements;
- (3) Has implemented all energy conservation maintenance and operating procedures recommended as a result of the energy audit. If any such procedure has not been implemented, the application shall contain a satisfactory written justification for not implementing that procedure;
- (4) Will obtain from the technical assistance analyst, before the analyst performs any work in connection with a technical assistance program, a signed statement certifying that the technical assistance analyst has no conflicting financial interests and is otherwise qualified to perform the duties of a technical assistance analyst in accordance with these rules;
- (5) Will comply with all applicable reporting requirements;
- (6) In the case of local government and public care institutions, a certification that the buildings are owned and primarily occupied by offices or agencies of a unit of local government or public care institution and that the buildings are not intended for seasonal use, and are not utilized primarily as a school or hospital;
- (7) In the case of a school, a certification that financial assistance will not be used for a technical assistance program in any building of such agency which is used principally for administration.

**8.4(2) *Energy conservation measures.***

*a.* Applications from schools or hospitals for financial assistance for energy conservation measures, including renewable resource measures, shall include:

- (1) The applicant’s name and mailing address;
- (2) A written statement certifying that the applicant is eligible under 8.3(1);
- (3) Identification of each building for which financial assistance is requested, including the name or other identification of each building and its address, the building category, description of functional use, ownership, and the size of building expressed in gross square feet;
- (4) A project budget by building which stipulates the intended use of all federal and nonfederal funds, and identifies the sources and amounts of nonfederal funds, including in-kind contributions (limited to the goods and services described in OMB Circular A-102, “Uniform Requirements for Grants-in-Aid to State and Local Governments,” which are directly related to the project and do not include funds derived from revenue sharing or other federal sources), to be used to meet the cost-sharing requirements described in these rules;
- (5) A schedule, including appropriate milestone dates, for the completion of the design, acquisition and installation of the proposed energy conservation measures for each building;
- (6) A list, by building, of the specific energy conservation measures proposed for funding, indicating the cost of each measure, the estimated energy and energy cost savings of each measure, the projected simple payback period for each measure, computed in accordance with the methodology described in 10 CFR 455.42(d)(5)(vii) and the average simple payback period for all measures proposed for the building. The average simple payback period of all measures proposed shall be determined by dividing the total estimated cost by the total projected annual cost savings from energy savings only;
- (7) A technical assistance report completed since the most recent construction, reconfiguration or utilization change to the building which significantly modified energy use for each building;

(8) If the applicant is aware of any adverse environmental impact which may arise from adoption of any energy conservation measure, an analysis of that impact and the applicant's plan to minimize or avoid such impact;

(9) Grant awards will be limited as set forth in 8.7(1).

*b.* Applications for financial assistance for energy conservation measures provide that the applicant:

(1) Has satisfied the requirements set forth in 8.4(2);

(2) Will expend granted funds for the purpose stated in the application and in compliance with federal requirements;

(3) Has implemented all energy conservation maintenance and operating procedures recommended as a result of the energy audit and, those recommended in the report obtained under a technical assistance program. If any such procedure has not been implemented, the application shall contain a satisfactory written justification for not implementing that procedure;

(4) Will obtain from the technical assistance analyst before the analyst performs any work in connection with an energy conservation measure a signed statement certifying that the technical assistance analyst has no conflicting financial interests and is otherwise qualified to perform the duties of a technical assistance analyst in accordance with these rules;

(5) Will not enter into any contract relating to an energy conservation measure, which requires or may require expenditure of more than \$5,000 (excluding technical assistance costs), that does not conform to the provisions of the Davis-Bacon Act (40 U.S.C. Section 276a to 276a-5) pertaining to minimum wages for construction in the applicant's locality;

(6) Will comply with all applicable reporting requirements; and

(7) In the case of a school, a certification that financial assistance will not be used for energy conservation measures in any building of such agency which is used principally for administration.

#### **565—8.5(473) Grantee—records and reports.**

**8.5(1) *Records.*** Each school, hospital, unit of local government, public care institution and coordinating agency which receives a grant for a technical assistance or energy conservation measure program shall keep all the records required by 10 CFR 455.4, April 30, 1985. These records will be retained for a minimum of three years after completion of the program for which a grant was awarded.

**8.5(2) *Semiannual reports.*** By the end of January and July of each year, each grantee shall submit a report to the department which shall detail and discuss:

*a.* Milestones accomplished, those not accomplished, status of in-progress activities, problems encountered, and remedial actions; and

*b.* Financial status reports completed in accordance with the documents listed in 10 CFR 455.63, April 30, 1985. Two copies of the financial status and progress reports must be submitted to the department.

**8.5(3) *Final reports.*** Within 90 days of concluding a technical assistance or energy conservation measures program, the grantee shall submit two copies of the final report to the department which shall detail and discuss, as applicable.

1. A summary of all work accomplished;

2. Problems encountered;

3. Final financial reports completed in accordance with the documents listed in 10 CFR 455.3;

4. For a completed technical assistance program: The technical assistance report, a recommended plan to implement energy conservation maintenance and operating procedures, and plans to acquire and install energy conservation measures;

5. For completed energy conservation measures: A listing and description of energy conservation measures acquired and installed, a final projected simple payback period computed in accordance with 10 CFR 455.42, April 30, 1985, for each building specifying the actual costs for each measure and a statement that the completed modifications conform to the technical assistance report and the approved grant application. Final reports may be submitted in lieu of semiannual reports if the semiannual report becomes due within 90 days of concluding the energy conservation measure grant.

**8.5(4) *Annual energy use reports.*** Grantees shall submit annual reports to the department covering each year of the 3-year period following installation of an energy conservation measure or measures, or for the life of the program, whichever is shorter. Annual reports shall identify each building and shall provide data on the actual energy use of that building for the most current 12-month period ending June 30. Energy use shall be presented on a monthly or quarterly, as well as an annual basis, consistent with the energy billing cycle for the building. Annual reports shall be submitted within 60 days of the close of each 12-month period.

## **565—8.6(473) Evaluation and ranking of applications.**

### **8.6(1) *Evaluation.***

*a.* If an application received by the department is found to be in compliance with the provisions of this chapter and other laws and regulations, the applicant will be eligible for financial assistance.

*b.* The federal rules require that the department forward each application for a school or hospital to the appropriate state agency for review and certification that the applications are consistent with state programs in these areas (455.70(b)). The department proposes to have the state department of education and the state department of public health be the reviewing agencies for this program.

### **8.6(2) *State ranking of grant applications.***

*a.* All eligible applications for technical assistance and energy conservation measures will be ranked by building to establish priorities for recommending federal matching funds.

*b.* When steam is an energy source generated outside the applicant's building or complex, the applicant may request that the department consider for ranking purposes the fuels used to generate the steam prorated by the energy entering the building. Requests will be approved only if the steam provider is willing and able to provide information on fuels used, this information accompanies the request and the department staff can verify this information.

*c.* In cases of a tie in the ranking of two or more institutions, those who have not used federal funds under Institutional Conservation Program before will get first priority. If the tie is still unbroken, priority will be given when energy conservation measures have been implemented without federal funds.

*d.* All applications will be subject to verification. Utility data or energy planning documents may be requested of applicants, for example.

**8.6(3) *Technical assistance ranking criteria.*** For technical assistance, the following factors are considered in ranking:

*a.* An energy use index, according to the formula:

$$\text{EUI} \times 0.40 \text{ points,}$$

where EUI is yearly energy requirements of the building in  $\text{Btu's/ft}^2 \cdot \text{degree-day} \cdot \text{yr}$ . When EUI is greater than 50, the value used for EUI will be 50. When EUI is less than 10, the value used for EUI will be 10.

- b. A yearly energy cost index, according to the formula:  

$$ECI \times 4 \text{ points,}$$
 where ECI is the yearly energy cost in  $\$/\text{yr} \cdot \text{ft}^2$ . When ECI is greater than 5, the value used for ECI will be 5. When ECI is less than 1, the value used for ECI will be 1.
- c. The primary type of fuel used for heating, according to the formula:
- |             |           |
|-------------|-----------|
| Oil         | 20 points |
| Gas         | 15 points |
| Electricity | 15 points |
| LPG         | 15 points |
| Other       | 10 points |
- d. Ten points will be awarded if the operating authority of the building has designated a staff member to evaluate and monitor energy conservation.
- e. Ten points will be awarded if the operating authority has formally adopted a plan for energy use evaluation and change.
- f. Ten points will be awarded if the operating authority has adopted or changed operational or maintenance procedures to conserve energy.
- g. Applications withdrawn after two months following the application deadline will be penalized 5 points for the next cycle. Exception will be granted if there has been a change in the institution's intention to close or dispose of the building, a catastrophe or natural accident occurs, or other unforeseen or uncontrollable events occur.
- 8.6(4) Energy conservation measure ranking criteria.** For energy conservation measures, the following factors are considered in ranking:
- a. The average simple payback period (ASPP) of all energy conservation measures for the building, according to the formula:  

$$(10 - \text{ASPP}) \times 4 \text{ points,}$$
 where ASPP is the total estimated cost of all energy conservation measures divided by the total annual estimated energy cost savings.
- b. For renewable and coal conversions, estimated energy cost savings will be based on the fuel replaced according to the formula:  

$$SI/2 + 1 \text{ points,}$$
 where SI is the percentage of total renewable annual energy displaced (Btu) by the renewable project related to the existing annual energy consumption (Btu).  

$$SI = \text{renewable savings} : \text{annual consumption}$$
- c. The annual nonrenewable energy savings, according to the formula:  

$$QSI/2 \text{ points,}$$
 where QSI is the percentage of annual energy (Btu) estimated to be saved from all ECMs combined, related to the existing annual energy consumption (Btu). When the percentage is greater than or equal to 60 percent, the value used for QSI will be 60 percent. The maximum point range for this factor is 30.
- d. Technical assistance quality will be measured for a maximum of 8 points, as follows:
- |                  |                   |
|------------------|-------------------|
| (1) General      | 1.0 points        |
| (2) Descriptions | 5.0 points        |
| (3) Analysis     | <u>2.0 points</u> |
|                  | 8.0 Total         |

Complete written details may be obtained by contacting the department.

e. If an application is withdrawn after two months of the application deadline, that building will be penalized 5 points on their application for the next cycle. Exception will be granted if there has been a change in the institution's intention to close or dispose of the building, a catastrophe or natural accident occurs, or other unforeseen or uncontrollable events occur.

**8.6(5) *Allocation of funds.*** Of the total funds allocated to the institutions for technical assistance and energy conservation measures, no type of institution (e.g., hospitals, schools) will receive more than 70 percent of the available funding regardless of the criteria established in 8.6(2) "a." The sole exception is when all other eligible applications have been recommended for funding and funds remain available.

When all eligible applications do not exhaust the funding for technical assistance, energy conservation measures or hardship, the excess funds will be used as needed for one of the other two areas.

**8.6(6) *Severe hardship consideration.***

a. Applicants for technical assistance and energy conservation measure grant funds that are unable to provide the 50 percent nonfederal share can apply for additional financial assistance to cover more than 50 percent but not greater than 90 percent of the cost of a technical assistance program or an energy conservation measure. The application for severe hardship consideration shall stipulate the amount of federal funds requested and shall include the following information in addition to the requirements of 8.4(473) of these rules:

- (1) The total cost of the proposed technical assistance program or energy conservation measures;
- (2) The amount expended by the applicant institution for energy in the most current 12-month period ending June 30;
- (3) The institution's present total annual operating budget; and
- (4) A written statement by the department of health (in the case of hospitals) and the department of public instruction (in the case of schools) that the subject application is a hardship case deserving of special consideration.

b. The department shall rank the hardship applications on the basis of the ranking criteria contained in 8.6(2) of these rules.

c. The departments of public health and education shall ensure that the following condition is met before stating that a subject application is a hardship case deserving of special consideration.

The percent of the institution's annual energy costs (for the most recently completed fiscal year) to the annual operating expenditures (for the same fiscal year) is not less than 3 percent.

**8.6(7) *State recommendations.*** The department will recommend to the U.S. Department of Energy the amount of the grant moneys which an applicant for technical assistance or energy conservation measures should receive. Within 30 days of the department's recommendation to U.S. Department of Energy, the applicant must remit to the department a processing fee of 5 percent of the federal grant's share of the application. If the applicant does not receive a grant, the fee will be returned.

a. *Energy conservation measures.* In order to determine the state recommendations, the department shall rank all buildings in accordance with 8.6(473) of these rules and insert the appropriate federal share as the state's recommendation.

b. Reserved.



**565—8.7(473) Grant awards.** The grant awards from the U.S. Department of Energy for technical assistance or energy conservation programs shall be only up to 50 percent of their cost, except in the case of severe hardship, as outlined in 8.6(6). The school, hospital, unit of local government, or public care facility must provide the remaining 50 percent from either nonfederal local funds or in-kind contributions, as defined in 565—subrule 7.1(2).

**8.7(1) Funding limits.**

*a.* ECM applications will have a funding limit if the grant requested is in excess of \$50,000. This limit is 15 percent of the total allocation to the state for the application cycle.

*b.* Hardship grants may not exceed 80 percent of the amount of basic grant. Example: A school or hospital receiving a \$50,000 basic grant would be limited to a \$40,000 hardship grant ( $\$50,000 \times 80\% = \$40,000$ ).

**8.7(2) Reserved.**

**565—8.8(473) Technical assistance analysts.** In order to qualify for a technical assistance analyst, a person must:

1. Be a registered engineer, as defined in Iowa Code chapter 542B, or in the case of an architect, be registered in accordance with Iowa Code chapter 544A, and be a part of an architect-engineer team; and be knowledgeable and experienced in energy conservation matters.

2. As of January 1986, the department will select a number of technical analysts to serve all institutional grantees. The selection will occur annually. Selection of qualified analysts will be based on criteria including past performance, qualifications, availability and cost.

Rules 8.1(473) to 8.8(473) are intended to implement Iowa Code section 473.7, as specified by 10 CFR 455.90, April 30, 1985.

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